

REMARKS

The present remarks are in response to the June 21, 2006 Office Action where the Examiner rejected all of the examined claims. Claims 14-23 and 25-30 were pending for consideration, and claims 1-13 and 31-47 have been withdrawn due to an Election/Restriction requirement. Claim 24 was previously cancelled. Claims 14-23 and 25-30 were rejected under 35 U.S.C 103(a) as being allegedly anticipated by U.S. Patent No. 6,165,606 (hereinafter "Kasahara") in view of U.S. Patent No. 6,129,785 (hereinafter "Schliesman") and U.S. Published Patent Application No. 2003/0064206 (hereinafter "Koyano").

REJECTIONS UNDER 35 U.S.C. 103(a)

Claims 14-23 and 25-30 were rejected under 35 U.S.C 103(a) as being allegedly anticipated by Kasahara in view of Schliesman and Koyano. Before discussing the obviousness rejections herein, it is thought proper to briefly state what is required to sustain such a rejection. The issue under § 103 is whether the PTO has stated a case of *prima facie* obviousness. According to the MPEP § 2142, the Examiner has the burden and must establish a case of *prima facie* obviousness by showing the prior art reference, or references combined, teach or suggest all the claim limitations in the instant application. Further, the Examiner has to establish some motivation or suggestion to combine and/or modify the references, where the motivation must arise from the references themselves, or the knowledge generally available to one of ordinary skill in the art. The Applicant respectfully asserts the Examiner has not satisfied the requirement for establishing a case of *prima facie* obviousness in any of the rejections. The Examiner has not shown each and every claim limitation in the prior art. Specifically, the alkali metal present in the ink-receiving layer at from about 0.4 wt% to about 10 wt% has not been shown.

Kasahara teaches an ink-jet recording sheet with a recording layer containing a binder and inorganic particles. Kasahara further teaches generally of the use of a polyvinyl alcohol or derivative thereof as a binder, boric acid as an additive hardening agent, and potassium carbonate as a pH-adjusting agent. Schliesman is cited to show ink jet recording mediums having a coating composition with a pH range of 4.0 to 7.0.

Koyano is cited by the Examiner to show lithium compounds used as pH controlling agents. Koyano specifically teaches the use of lithium hydroxide and lithium carbonate as effective pH controlling agents.

None of the references teach the alkali metal being present in the ink-receiving layer at from about 0.4 wt% to about 10 wt%, as claim 14 requires. The potassium carbonate of Kasahara cited by the Examiner is taught as an additive amongst a laundry list of other possible additives such as antifading agents, whitening agents, and UV absorbers. Kasahara does not go into greater detail other than this brief listing, and certainly does not teach the required weight percentages. Likewise, neither Schliesman nor Koyano teach the required weight percentages included in the ink-receiving layer. Koyano does exemplify use of lithium hydroxide in various amounts, which is not applicable to the present invention, as lithium hydroxide is not a weak base. As none of the references, either alone or in combination, teach the distinct and required claim element of an alkali metal present in the ink-receiving layer at from about 0.4 wt% to about 10 wt%, a *prima facie* case of obviousness has not been presented.

Furthermore, and even more notably, none of the references, either alone or in combination, teach the gas generated bubbles located within the ink receiving layer. The gas generated bubbles of the present invention are generated by reacting an acid with a weak base comprising a salt of an alkali metal and a weak acid. The Examiner relies solely on an inherency argument in that due to the presence of potassium carbonate and boric acid as presented in Kasahara, they would react and form bubbles of the claimed diameter. However, this is not the case. There is no teaching or inference of including potassium carbonate and boric acid together in a recording layer. Boric acid is taught as being used as a hardening agent for polyvinyl alcohol (a reaction that is well known). Kasahara notes that various additives can be included in “an optional layer,” (underlining added) separate and apart from the layer which includes the boric acid. Potassium carbonate and other pH-adjusting agents are included in a laundry list of such additives for potential inclusion in the optional layer. Based on the reference, then, even if both boric acid and potassium carbonate were included in the same embodiment, they would not even be in the same layer, and thus, gas generated bubbles would not form, let alone remain present within the ink-receiving layer.

Additionally, even if the potassium carbonate and the boric acid of Kasahara were chosen from amongst many possibilities, and then placed in the same layer, which the disclosure teaches away from, there is no teaching or suggestion of generating gas bubbles within the layer. To illustrate, Kasahara teaches the use of boric acid as a hardening agent. As is commonly known in the art, boric acid will react or cross-link with the hydrophilic binder (in this case, polyvinyl alcohol), and thus harden the mixture. This is why boric acid may be added to the layer. If potassium carbonate were added to the mix, the boric acid would react with the potassium carbonate, thus frustrating the hardening described in Kasahara. Further, Example 1 of Kasahara clearly shows use of a high speed homogenizer to prepare the coating solution. Such mixing, if both compounds were present, could cause premature reaction (e.g. in the mixing step and not in a manner which would create gas bubbles within the ink-receiving layer). In other words, the claimed invention is drawn to retaining gas generated bubbles within the layer. This type of mixing could cause generating bubbles in the mixture to escape.

Yet further, Kasahara teaches away from the presence of gas generated bubbles located in the ink-receiving layer. The hardening agents in Kasahara, including boric acid, are added to improve the "film strength after printing" (see col. 15, ln. 5-11). Intuitively, the inclusion of gas generated bubbles within the ink-receiving layer would not have a strengthening effect. They would be expected to have quite the opposite effect. Therefore, Kasahara teaches away from the inclusion of gas generated bubbles. At the very least, there is certainly frustration of purpose of the boric acid to create the gas bubbles. Boric acid is specifically added in Kasahara to improve film strength after printing. Using boric acid, as the Examiner proposes, in the formation of gas generated bubbles which remain in the ink-receiving layer, would clearly contradict this purpose.

As the Examiner has not presented a *prima facie* case of obviousness, the Applicant requests the removal of the rejection.

CONCLUSION

In view of the foregoing, the Applicants believe that claims 14-23 and 25-30 present allowable subject matter and allowance is respectfully requested. If any impediment to the allowance of these claims remains after consideration of the above remarks, and such impediment could be removed during a telephone interview, the Examiner is invited to telephone Brad Haymond at (541) 715-0159 so that such issues may be resolved as expeditiously as possible.

Please charge any additional fees except for Issue Fee or credit any overpayment to Deposit Account No. 08-2025.

Dated this 20th day of September, 2006.

Respectfully submitted,



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